

HOOD

The present invention relates to hoods to be worn over a user's head. The invention particularly relates to such hoods which are  
5 attached to or integral with a garment. Most particularly, the present invention relates to hoods for use by individuals who have styled hair which they do not wish to become disturbed, or some other reason why the head should not be disturbed.

10 There is a problem with current means to keep dry in rain. An umbrella requires to be held in one hand. Umbrellas also provide an impediment to the user, obstruct the vision of the user, and, in crowded rainy streets, present a risk to the safety of both the user and others. Umbrellas obstruct the view of others at public events,  
15 such as concerts or sporting occasions, for example, in a stadium. Current rain hoods tend to blow back in wind and require at least one hand to keep them in place. The present invention seeks to provide a means for keeping the hair or head dry, which does not disturb or touch the hair or head, which allows both hands to be  
20 free, of utility to those pushing push chairs or carrying items, which does not impede the vision of the user, and which does not present an impediment to the visual field of others.

The cost and complexity of hair styling is such that an individual  
25 takes great care to avoid disturbance to the styled hair, especially when outside. This is true in ordinary life, and even truer in the cinematographic arts such as movies and television, where characters or commentators are "prepared" by a makeup department, at great expense, perhaps for outdoor filming, television transmission or  
30 video recording.

Other individuals may have medical or dental conditions where, for example, medical scaffolding is attached to the cranium to support reconstructive surgery, which also requires protection from outside  
35 weather.

Under such circumstances, a hat or ordinary hood is of little use, as it bears upon the cranium of the user to disturb any styled hair or makeup, and to snag and disturb any medical or dental appliance. The present invention seeks to provide means whereby an individual  
5 can gain protection from wind and weather without direct contact between the protecting device and the user's head.

According to a first aspect, the present invention consists in a hood for protecting the head of a user, said hood comprising: a  
10 flexible skin for providing weather protection for the user's head; and a foldable frame, operative to support said flexible skin; where said flexible skin is attached to said foldable frame; where said foldable frame is un-foldable to a first position where said  
15 foldable frame supports said flexible skin, surrounding at least a portion of the user's head and spaced from the head of the user; and where said foldable frame is foldable to a second position where said foldable frame and said flexible skin are stowed at a second position, with said flexible skin clear of the user's head.

20 According to a second aspect, the present invention consists in a frame for a hood, suitable for use as part of the first aspect of the invention, said frame being combinable with a garment.

The second aspect of the invention further provides that the frame  
25 can be fixed, inserted or sewn into the garment.

The second aspect of the invention further provides that the frame can be inserted into the hood fabric by means of at least one of: sewing; insertion into a seam in the hood fabric; insertion into a  
30 portion of hood fabric; gluing; and clipping.

The second aspect of the invention further provides that the frame can comprise one or more rigid members.

35 The second aspect of the invention further provides that the frame can comprise one or more flexible members.

The second aspect of the invention further provides that the frame can be unclipped.

5 The second aspect of the invention further provides that the frame can be folded by hinging, or can be folded by bending.

The second aspect of the invention further provides that the frame can be inserted into a garment at manufacture, or can be attached as a separate item to a garment.

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The second aspect of the invention further provides that the frame can comprise an "L" shaped member, allowing the hood to reach forward over the wearer's face when the hood is in use, and to enable the hood to lie flush against the back of the wearer when the hood is not in use.

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The first and second aspects of the invention further provide a hood wherein the foldable frame can comprise: a first hinge, for attachment proximate to the front of a collar on a first side of a garment: and a second hinge, for attachment proximate to the front of the collar on a second side of the garment; where the foldable frame can comprise one or more frame elements, extending from said first hinge to said second hinge and pivotable there-about.

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25 The first and second aspects of the invention further provide a hood wherein the foldable frame can comprise one or more substantially rigid frame members, the one or more substantially rigid frame members being pivotable about the first and second hinges between said first position and said second position.

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The first and second aspects of the invention further provide that the one or more substantially rigid frame members can be two or more substantially rigid frame members, and that a first substantially rigid frame member can pivot about the hinges, that the first substantially rigid frame member can comprise first and second pivots on either side thereof, and that second and subsequent

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substantially rigid frame members can be affixed at their ends to pivot about the first and second pivots.

The first and second aspects of the invention further provide a hood wherein the foldable frame can comprise one or more substantially flexible members, the one or more substantially flexible members being twistable upon themselves from the first position, where the foldable frame is in a first stable configuration and extended, to the second position, where the foldable frame assumes a second stable configuration where the foldable frame is looped upon itself.

The first and second aspects of the invention further provide that the one or more substantially flexible frame members can be two or more substantially flexible frame members, and that a first substantially flexible frame member can pivot about the hinges, that the first substantially flexible frame member can comprise first and second pivots on either side thereof, and that second and subsequent substantially flexible frame members can be affixed at their ends to pivot about the first and second pivots.

The first and second aspects of the invention further provide a hood wherein the first position can comprise the foldable frame, when the user is wearing the garment, supporting the flexible skin to protect the top, sides and rear of the user's head; and wherein the second position can comprise the foldable frame and the flexible skin being disposed behind the collar on the back of the garment.

The first and second aspects of the invention further provide a hood wherein the foldable frame can extend the flexible skin when in the first position, and wherein the foldable frame can collapse the flexible skin when in the second position.

The first and second aspects of the invention further provide a hood which can be removably attachable to a garment, or which can be an integral part of a garment.

The first and second aspects of the invention further provide a hood wherein the flexible skin can be transparent, or can be fabric.

5 The first and second aspects of the invention further provide a hood wherein the foldable frame can comprise plastics material.

The invention is further explained, by way of example, by the following description, to be read in conjunction with the appended drawings, in which:

10 Figure 1 shows a side view of a first embodiment of the present invention, with the hood in the up position, with a frame attached to a garment by a hinge mechanism..

15 Figure 2 shows a view, from the front, of the first embodiment of the present invention, otherwise shown in Figure 1, with the hood in the up position.

20 Figure 3 shows a front, oblique view, of the first embodiment of the present invention, with the hood in the up position, otherwise shown in Figures 1 and 2.

Figure 4 shows details of the hinge mechanism, used in the first embodiment of the present invention and otherwise visible in figures 1, 2 and 3.

25 Figure 5 shows a detailed close up view of the hinge of Figure 4, used in the first embodiment of the present invention.

30 Figure 6 shows a side view of the first embodiment of the present invention, with the hood in the down position.

35 Figure 7 shows a side view of a second embodiment of the present invention, with the hood in the up position, where the frame comprises two preferably flexible hoops which are hinged relative to each other and one of which is hinged onto a garment..

Figure 8 shows a side view of the second embodiment of the present invention, with the hood in the down position, illustrating how the frame and the fabric of the hood lie against the wearer's back.

5 Figure 9 shows the hood and frame, as otherwise shown in Figure 8, when the frame is flexible, can be flexed into a folded position and can be parked within a pouch or otherwise covered when the hood is not required.

10 Figure 10 shows a front oblique front view of a third embodiment of the present invention where a hood is supported by with a single frame which is held by clips on either side of the collar of a garment.

15 Figure 11 shows a an oblique side view in the up position the third embodiment of the invention, otherwise seen in Figure 10.

Figure 12 shows a side view of the third embodiment of the invention, with the hood in the down position.

20 Figure 13 shows a side view of an attachment whereby a removable hood can be attached to a garment not otherwise provisioned for accepting attachment of a hood.

And

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Figure 14 shows, from a front oblique view, how the attachment is used to secure a hood to the garment.

30 Attention is first drawn to Figure 1 showing a side view of a first embodiment of the present invention. A hood 10 comprises a skin 12 in this case being of transparent or semi-transparent polymer sheet. The skin 12 can equally be formed of fabric, or any other flexible and preferably waterproof membrane.

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A rigid frame 14 comprises a main member 16 and, in this example, two secondary members 18. A pair of hinges 20 is provided, one on

either side of a collar 22 of a garment 24. The main member 16 is arcuate and attached, at each end to one of the hinges 20. The main member 16 is pivotable about the hinges 20 as indicated by arrow 26.

- 5 The main member 16 comprises a pair of pivots 28 between which each of the secondary members 18 is attached. The secondary members 18 are free to rotate about the pivots 28 as indicated by arrows 30.

10 The main member 16 and the secondary members 18 are attached to their relevant positions on the skin 12 so that, as the main member 16 and the secondary members 18 are moved to the position shown in Figure 1, the skin 12 is also moved to assume an extended position protecting the top, sides and rear of the user's head.

- 15 The hood 10 is shown in Figure 1 in a first position, the first up position where the hood is in use.

20 Figure 2 shows the hood of Figure 1 in the up position, viewed from the front. Figure 3 shows an oblique front view of the hood 10, in the up position, as otherwise shown in Figures 1 and 2.

When in the up position the main member 16, the secondary members 18 and the skin 12 are held at a distance from the head of the user so that any style of hair, or head attachment is not fouled by the main member 16, the secondary members 18 or the skin 12.

Attention is next drawn to Figure 4 showing details of the mechanism of the hinge 20 as used in the first embodiment shown in Figures 1, 2 and 3.

30 The hinge 20 supports the main member 16 to rotate about a centre 32 partially enclosed, at its distal end, by a locating sleeve 34. The main member 16 moves about the centre 32 as indicated by arrow 36. When in the up position, as shown in Figures 1, 2 and 3, the distal end of the main member 16 is urged into a locating recess 38 within the locating sleeve 34, the locating sleeve 34 being substantially circular in section. The locating recess 38 retains the main member

16 in the up position and the pivot 28 supports the movement of the secondary members 18, as pulled into position by the skin 12 to which the secondary members 18 are attached, to the positions shown. Figure 5 shows a detailed close up view of the hinge 20, otherwise  
5 shown in Figures 1, 2, 3 and 4.

The hinge 20 is affixed by a metal stud 40 to the collar 22 on the garment 24. The main member 16 is urged by a spring 42 towards the locating recess 38 which it enters when the hood 10 is in the up  
10 position as shown in Figures 1, 2 and 3. To collapse the hood 10, the main member 16 is simply urged to compress the spring 42 so that the main member may be rotated towards the down position (explained hereafter) within the locating sleeve 34.

15 The hinge 20 is shown irremovably attached to the collar 22 of the garment 24 by a stud 40. The hood 10 could equally well be attached to the collar 22 by removable and re-attachable means, such as one or more buttons, hooks or press stud fixings, and the stud 40 could equally be made from any other durable rigid or semi-rigid material.

20 Figure 6 shows the hood 10, otherwise shown in Figures 1, 2 and 3, in the down position 44 where the main member 16 has been rotated to the down position 44 as indicated by arrow 46 where the skin 12 is in a collapsed state, disposed against the back 48 of the garment  
25 24. The main member 16, being substantially "L" shaped, permits itself and the secondary members to lie substantially flush with the back of wearer when in the down position.

Attention is drawn to Figure 7, showing a side view of a second  
30 embodiment of the invention.

A first member 50 is pivoted on a second member 52 by a pair of pivots 28. The first 50 and second 52 members resemble two inter-meshed hoops. The second member 52 is held in a hinge 54 on  
35 the collar 22 of a garment 24. The hinge 50 can be a complex hinge, such as the hinge 20 shown in Figures 4 and 5, or can be a much simpler affair. In Figure 7, the hood 10' is shown in the up



position. When in the up position, the first member 50 and the second member 52 co-operate to support the skin 12 to be spaced away from the head of a user and to offer protection to the top, sides and rear of the user's head.

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Figure 8 shows a side view of the hood 10' of Figure 7 in the down position where the first member 50 and the second member 52 are in substantial alignment with each other and lie against the back 48 of the garment 24 with the skin 12 in a non-expanded condition.

10 The first 50 and second 52 members of Figures 7 and 8 can be implemented in rigid or flexible material. When implemented in flexible material, which is preferred, a further utility becomes apparent, as shown in Figure 9

15 Figure 9 which shows how the folded hood and frame of Figure 8 can be flexed into a folded position when the hood is in the down position. The frame 14' is not rigid and is made from an elastically flexible material. Examples of suitable material would be plastic strip, spring steel and so on. The material is twisted as  
20 illustrated by arrows 60 and 62 to form three flat substantially concentric circular loops 56. The folded hood and frame can then be packed away into a zip pocket 58 or other like enclosure, at the back of the garment 24.

25 Figure 10 shows a front oblique view of a third embodiment of the invention, having just a single frame 64 which is held by clips 66 on either side of the collar 22 of a garment 24.

In Figure 10, the single frame 64 is substantially "L" shaped and is  
30 shown in the up position. The single frame 64 is a length of material held on the clips 66. In the up position the ends of the frame member are urged into and held by clips 66 at points on either side of the garment 24 collar 22.

35 Figure 11 shows a side oblique view of the third embodiment of the invention, shown in Figure 10, with the hood 10 in the up position. The skin 12 is ducted by the single support frame 64 to lie adjacent

to the outside of the collar 22 and is of such dimensions as to envelop the head of the wearer without placing pressure on any part of the wearer's head, coiffeur or other cranial accoutrement.

5 Figure 12 shows a side view of the third embodiment of the invention, otherwise shown in Figures 10 and 11, this time with the hood 10 in the down position. The substantially "L" shaped single support frame 64 allows the hood, in the down position, to lie substantially flush with the back of the wearer. If made of flexible  
10 material, the single support frame can be further folded for compactness, as generally shown in Figure 9.

Thus far, the hood 10 has been shown in a form which is essentially integral with a garment 24. Both the rigid frame hood 10 and the  
15 flexible frame hoods 10 can be manufactured and sold as independent items which can be attached, virtually to any garment and, when not required, detached from that garment.

To enable this to happen, attention is drawn to Figure 13 which  
20 shows a spring clip 68 which can be clipped to the collar 22 of a garment 24 and opened and closed as indicated by arrow 70, the spring clip 68 comprises a stud attachment 72 about which the frame of a hood 10, 10', 10'' is free to swivel as indicated by arrow 74 when attached to the spring clip 68.

25 It is to be appreciated that the spring clip can attach, via its stud attachment 72, to any portion of any style of frame connected with the present invention.

30 Finally, attention is drawn to Figure 14 which shows how a detachable hood 10, similar to that shown in Figure 1, can be affixed to a garment 24 by means of a minimum of three spring clips 68, as indicated by arrow 76. A spring clip 68 is provided on either side of the collar 22 of the garment 24 and a further spring  
35 clip 68 is provided at the rear of the collar 22 of the garment 24. The hood 10 is then attached to the garment 24 by affixing to the

stud attachments 72 on each of the spring clips 68, and the hood 10 and the clips 68 removed when not required.

5 It is within the scope of the invention that the spring clips 68 can be integral with the hood 10 so that the hood 10 can be clipped, as a unit, to the garment 24 and/or to the collar 22.

10 While the flexible skin 12 is shown as being permanently attached to the frame 14, it is appreciated that the flexible skin 12 is likely to enjoy a shorter lifetime than the frame 14. The flexible skin can therefore be replaceable, and the frame 14 can be attachable to the flexible skin 12 by means of sewing, insertion into a seam in the flexible skin, insertion into a portion of the flexible skin, gluing, hooks, press fittings, snap clips, and spring clips.

15 The invention can be provided as two parts, a first part comprising the frame 14 and any garment 24 with which it might be incorporated, and the second part comprising the flexible skin 12.